WO 2005/064433 PCT/IB2004/052674

15

CLAIMS:

1. A method of encrypting at least part of a computer program element for enabling protecting execution of said computer program element, comprising the steps of:

- extracting at least one static resource (306) of said computer program element (step 102), and
- 5 encrypting the at least one static resource (306) with a key (314, step 106).
 - 2. Method of encrypting according to claim 1, further comprising the step of:
 - storing the at least one encrypted static resource (310) in said computer program element (step 110).

10

- 3. Method of encrypting according to claim 1, in which the key (314) is a public key of a public/private key pair.
- 4. Method of encrypting according to claim 3, further comprising the step of:
 storing the public key (314) in a computer program element (step 112).
 - 5. Method of encrypting according to claim 3, further comprising the step of:
 - obtaining the corresponding private key (316), and
- storing said private key (316) in an entity (318) separate from an entity in which the computer program element is provided (step 114).
 - 6. Method of encrypting according to claim 1, wherein the step of extracting (step 102) comprises extracting the at least one static resource (306) from a certain position in the program element and the step of storing (step 110) comprises storing the encrypted static resource (310) in said position.
 - 7. Computer program encryption device for encrypting at least part of a computer program element for enabling protecting execution of said computer program element, arranged to:

- extract at least one static resource (306) of said computer program element (302, step 106), and
- encrypt the at least one static resource (306) with a key (314, step 106).
- 5 8. Computer program product comprising a computer readable medium, having thereon computer program code means, to make a computer execute, when said program code means is loaded in the computer:
 - extracting of at least one static resource (306) of said computer program element (302, step 102), and
- encrypting the at least one static resource (306) with a key (314, step 106).
 - 9. Computer program element comprising computer program code means to make a computer execute, when said computer program code means is loaded in a computer,
 - extracting of at least one static resource (306) of said computer program
- 15 element (302, step 102) and
 - encrypting the at least one static resource (306) with a key (314, step 106).
 - 10. Computer program product comprising a computer readable medium, having thereon computer program code means comprising:
- 20 at least one static resource encrypted with a key (310).
 - 11. Computer program product according to claim 10, where said key (314) is a public key of a public/private key pair.
- 25 12. Computer program product according to claim 11, wherein said computer program code means further comprises:
 - said public key (314).
- 13. Computer program element comprising computer program code means30 comprising:
 - at least one static resource encrypted with a key (310).
 - 14. Method of decrypting at least part of a computer program element for enabling execution of said computer program element (402), comprising the steps of:

- obtaining at least one static resource (406) encrypted with a first key (314), in a first entity (52),
- providing said at least one encrypted static resource (406) to a second entity (54, step 208), and
- obtaining by said first entity (52) said at least one static resource (430) from the second entity (54, step 210), where the encryption according to the first key (314) has been decrypted using a second key (422).
- 15. Method of decrypting, according to claim 14, further comprising the step of:

 obtaining a third key (step 202),
 - decrypting the at least one encrypted static resource (430), by using the third key (step 212),
 - wherein which the step of providing (step 208) comprises providing the third key (404) and said at least one encrypted static resource (406, 410) to the second entity (54), and the step of obtaining (step 210) by said first entity (52) said at least one static resource (430) from the second entity (54), comprises obtaining the at least one static resource encrypted (430) with the third key (426), so that the computer program element can be executed.
- 20 16. Method of decrypting, according to claim 14, in which the third key (404, 432) is a random session key.
 - 17. Method of decrypting, according to claim 14, further comprising the step of:
 - obtaining the first key (408),

15

- encrypting the third key (408) and said at least one encrypted static resource (406), by using said first key(408, step 206),
 - and in which the step of providing (step 208) said at least one encrypted static resource (410) to the second entity (54) comprises providing said third key (404) and said at least one encrypted static resource (406), both encrypted (410) by using the first key (408).
 - 18. Method of decrypting, according to claim 14, in which the first key (314, 408) and the second key (316) is the public and the private key, respectively, of a public/private key pair.

5

25

30

18

PCT/IB2004/052674

- 19. Method of decrypting at least part of a computer program element for enabling execution of said computer program element, comprising the steps of:
- obtaining at least one encrypted static resource (414) from a first entity (52, step 218), which at least one static resource (306) has been encrypted by using a first key (314),
- obtaining a second key (416, step 216),
- decrypting said at least one encrypted static resource (418), by using said second key (416, step 222), and
- providing said at least one static resource (424) to the first entity (52, step 228).
 - 20. Method of decrypting, according to claim 19, further comprising the step of:

 obtaining a third key (420) from the first entity (52),
- encrypting the at least one static resource (424) by using the third key (426), and in which the step of providing (step 228) said at least one static resource (428) to the first entity (52) comprises providing said at least one static resource (428) encrypted with the third key (426).
- 21. Method of decrypting, according to claim 20, wherein the at least one 20 encrypted static resource (406) and the third key (404), are obtained encrypted (414), which encryption has been made using the first key (314).
 - Method of decrypting, according to claim 21, further comprising the step of:
 decrypting by using the second key (416), the encrypted (414) at least one
 encrypted static resource (406) and the third key (404, step 220).
 - 23. Method of decrypting according to claim 19, in which the first key (314) and the second key (416, 422) is the public and the private key, respectively, of a public/private key pair.
 - 24. Method of decrypting according to claim 19, in which the third key (420, 426) is a random session key.

- 25. Computer program decryption device (52) for decrypting at least part of a computer program element (402) for enabling execution of said computer program element, said device being arranged to:
- obtain at least one static resource (406) encrypted with a first key (314),
- 5 provide said at least one encrypted static resource (406) to a second entity (54, step 208), and
 - obtain from the second entity (54) said at least one static resource (430, step 210), where the encryption according to the first key (314) has been decrypted by using a second key (422).

10

- 26. Computer program decryption device (54) for decrypting at least part of a computer program element for enabling execution of said computer program element, said device being arranged to:
- obtain at least one encrypted static resource (414) from a first entity (52, step 218), which at least one static resource (414) has been encrypted by using a first key (314),
 - obtain a second key (416, step 216),
 - decrypt said at least one encrypted static resource (418) by using the second key (422, step 222), and
 - provide said at least one static resource (424) to the first entity (52, step 228).

20

- 27. Computer program product comprising a computer readable medium, having thereon computer program code means, to make a computer execute, when said computer program code means is loaded in the computer:
- obtaining at least one static resource (406) encrypted with a first key (314), in a first entity (52),
 - providing said at least one encrypted static resource (406) to a second entity (54, step 208), and
 - obtaining by said first entity (52) said at least one static resource (430) from the second entity (54, step 210), where the encryption according to the first key (314) has been decrypted by using a second key (422).
 - 28. Computer program element comprising computer program code means to make a computer execute, when said computer program code means is loaded in the computer:

PCT/IB2004/052674

- obtaining at least one static resource (406) encrypted with a first key (314), in a first entity (52),
- providing said at least one encrypted static resource (406) to a second entity (54, step 208), and
- obtaining by said first entity (52) said at least one static resource (430) from the second entity (54, step 210), where the encryption according to the first key (314) has been decrypted by using a second key (422).
- 29. Computer program product comprising a computer readable medium, having
 thereon computer program code means, to make a computer execute, when said program code means is loaded in the computer:
 - obtaining at least one encrypted static resource (414) from a first entity (52, step 218), which at least one static resource (414) has been encrypted by using a first key (314),
- obtaining a second key (416) in a second entity (54, step 216),
 - decrypting said at least one encrypted static resource (418) by using the second key (422, step 222), and
 - providing said at least one static resource (424) to the first entity (52, step 228).

20

- 30. Computer program element comprising computer program code means to make a computer execute:
- obtaining at least one encrypted static resource (414) from a first entity (52, step 218), which at least one static resource (414) has been encrypted by using a first key (314),
- obtaining a second key (416) in a second entity (54, step 216),
- decrypting said at least one encrypted static resource (418) by using the second key (422, step 222), and
- providing said at least one static resource (424) to the first entity (52, step 30 228).